

**PROTEIN/POLYPEPTIDE-K OBTAINED FROM MOMORDICA CHARANTIA
AND A PROCESS FOR THE EXTRACTION THEREOF.**

JBH
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5 This application is a continuation-in-part of International
Application PCT/IN99/00052 filed on Sept. 28, 1999, claims the benefit
Field thereof and incorporates the same by reference.

10 This invention relates to a highly effective hypoglycaemic protein called polypeptide-k,
extracted from *Momordica charantia*. This invention also provides a method for the
extraction of said polypeptide-k from *Momordica charantia*. Further, the invention
provides a novel hypoglycaemic composition employing the said protein, and useful in
the treatment of diabetes mellitus.

Background

15 Insulin has hitherto been commercially synthesized from the pancreas of animals and
human insulin from *E. coli* (Eli Lilly, U.S.A.). So far there is no report of commercial
extraction of insulin like polypeptide from plant source.

20 Isolation of insulin from animal pancreas is open to objection due to the following
reasons:

1. By killing 10,000 animals only one pound of pure insulin is obtained.
2. It is not being sublingually administered.
3. If the pancreas is infected by some diseases there is always a probability of its
being carried (if it is a virus) along with the insulin.
- 25 4. Human insulin can be synthesised from *E. coli* which is expensive.

Hence, to obviate these and other drawbacks in conventional insulin extraction methods,
scientists focussed on plant based products.

30 *Momordica charantia* is a perennial herb of the family Cucurbitaceae, widely grown in
Asia. The herb is endemic to tropical regions like India, S. Africa, Philippines, China and
Burma. The species of *Momordica* found in western countries are different from the
tropical species in that, the plants differ in morphological and organoleptic properties.